HAZARD IDENTIFICATION AND VULNERABILITY ANALYSIS (HIVA)

COMMUNICATIONS ACADEMY
2001
21 APRIL 2001

COMPREHENSIVE EMERGENCY MANAGEMENT

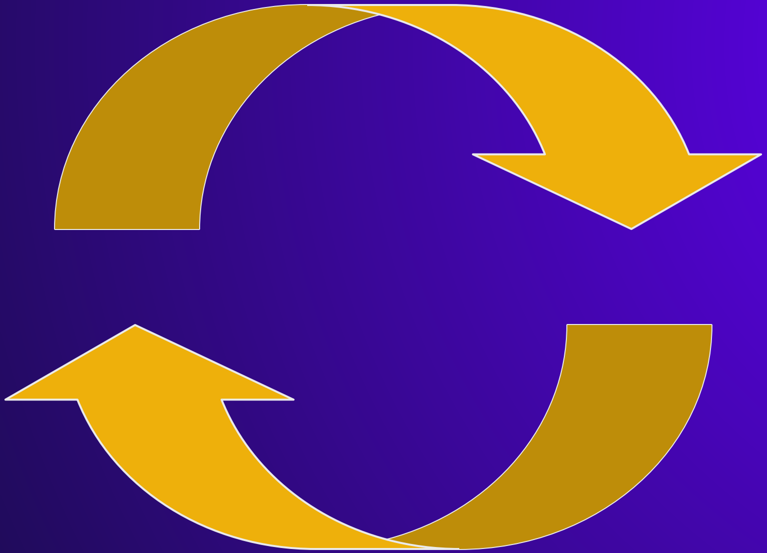
HIVA IS THE FIRST STEP

WHY COMPREHENSIVE EMERGENCY MANAGEMENT?

Comprehensive:

Broad in scope or concept---an all hazards approach.

CURRENT DOCTRINE



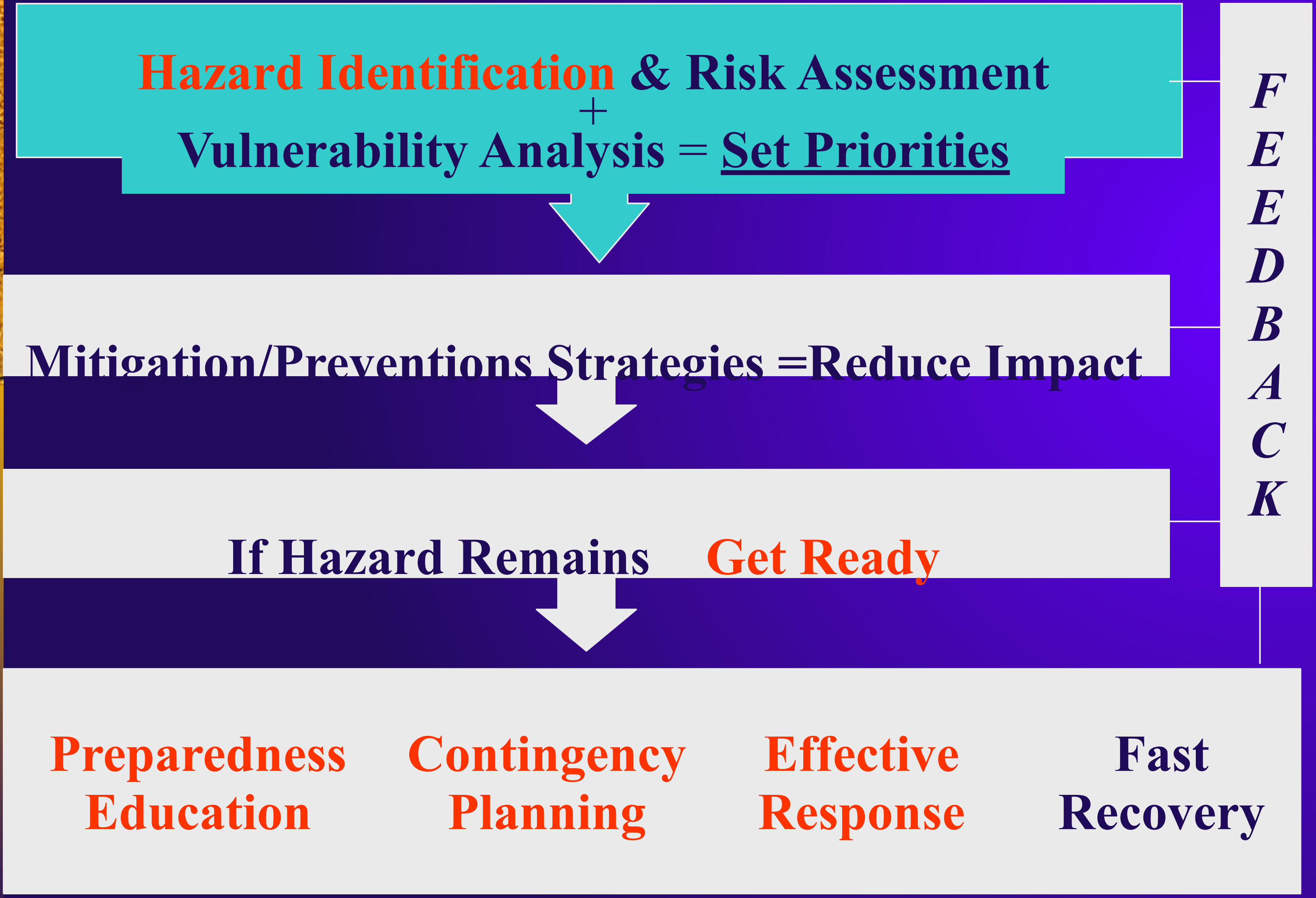
Preparedness

Response

Recovery

Mitigation

An Integrated Emergency Management Approach



Hazard Identification & Risk Assessment
+
Vulnerability Analysis = Set Priorities

Mitigation/Preventions Strategies =Reduce Impact

If Hazard Remains **Get Ready**

Preparedness Education

Contingency Planning

Effective Response

Fast Recovery

COMPREHENSIVE EMERGENCY MANAGEMENT

Definition:

An organized effort to mitigate against, prepare for, respond to, and recover from a technological or natural emergency.

COMPREHENSIVE EMERGENCY MANAGEMENT

Emergency:

Any event, natural or technological, which threatens or inflicts damage to people, property, and the environment.

COMPREHENSIVE EMERGENCY MANAGEMENT

Management:

Organized effort to control, direct, supervise, or administer.

COMPREHENSIVE EMERGENCY MANAGEMENT

Mitigation:

Activities which reduce or eliminate the chance of occurrence or the effects of an event.

COMPREHENSIVE EMERGENCY MANAGEMENT

Preparedness:

Actions taken in advance of an event to develop operational capabilities and facilitate an effective response.

COMPREHENSIVE EMERGENCY MANAGEMENT

Response:

Actions taken immediately before, during, or directly after an event to save lives, minimize damage, and enhance recovery.

COMPREHENSIVE EMERGENCY MANAGEMENT

Recovery:

Activities to return systems to the minimum operating standards and eventually to normal or improved levels.

WHY COMPREHENSIVE EMERGENCY MANAGEMENT?

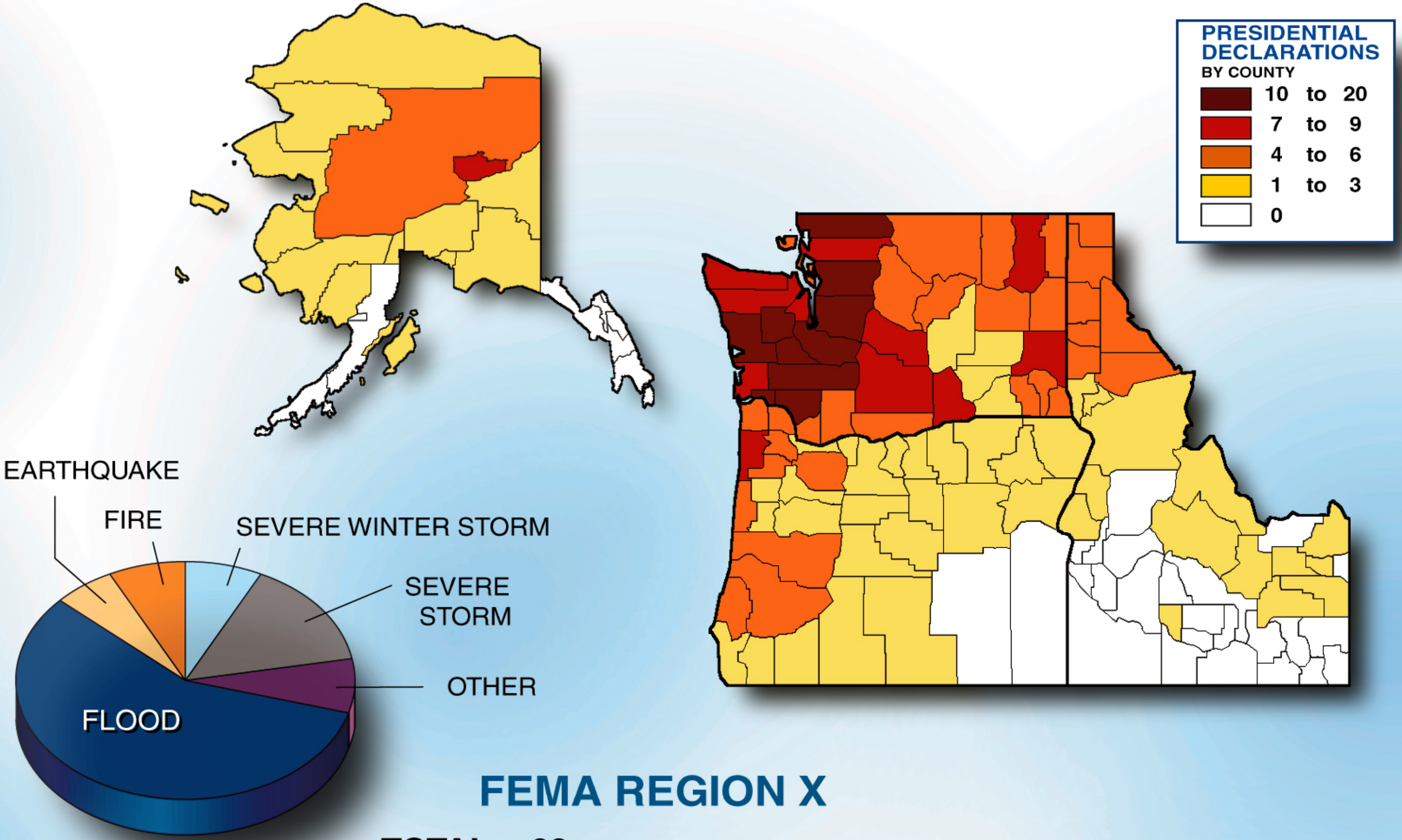
Forty-two Federal Disaster Declarations in 41 years.

Eight of nine natural hazards occur in Washington State

(This includes the Nisqually Earthquake)

PRESIDENTIAL DISASTER DECLARATIONS

January 1, 1965 to December 31, 1998



FEMA REGION X

TOTAL = 68

Data used with FEMA's permission.

RESPONSIBILITIES

- CEM & HIVA are shared Responsibilities
- EM community is not responsible for every phase of emergency management

RESPONSIBILITY BRACKETS

Phase	Mitigation	Preparedness Response	Recovery
Primary Responsible Entities	Public Works, Community Planners, CEO, Ecology, FEMA, etc	Public Safety (EM, Fire, LE, etc)	Public Works, Social Services, FEMA, Etc.

RESPONSIBILITY BRAKETS OPTION 1

Phase	Mitigation	Preparedness Response	Recovery
Primary Responsible Entities	Public Works, Community Planners, CEO, Ecology, FEMA etc	Public Safety (EM, Fire, LE, etc)	Public Works, Social Services, FEMA, Etc.

RESPONSIBILITY BRAKETS OPTION 2

Phase	Mitigation	Preparedness Response	Recovery
Primary Responsible Entities	Public Works, Community Planners, CEO, Ecology, FEMA, Etc.	Public Safety (EM, Fire, LE, etc)	Public Works, Social Services, FEMA, Etc.

RESPONSIBILITY BRACKETS OPTION 3

Phase	Mitigation	Preparedness Response	Recovery
Primary Responsible Entities	Public Works, Community Planners, CEO, Ecology, FEMA, etc	Public Safety (EM, Fire, LE, etc)	Public Works, Social Services, FEMA, etc.

WHO MUST DO A HIVA?

- Each political subdivision

  RCW 38.52

- Plan based on hazard analysis

  WAC 118-30

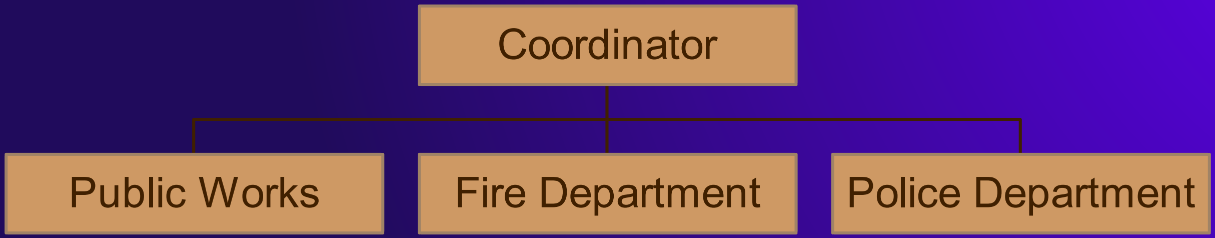
HIVA CONTENTS

- Introduction
- Geography
- Economy
- Demographics
- Natural Hazards
- Technological Hazards (man made)
- Tables
- Matrices

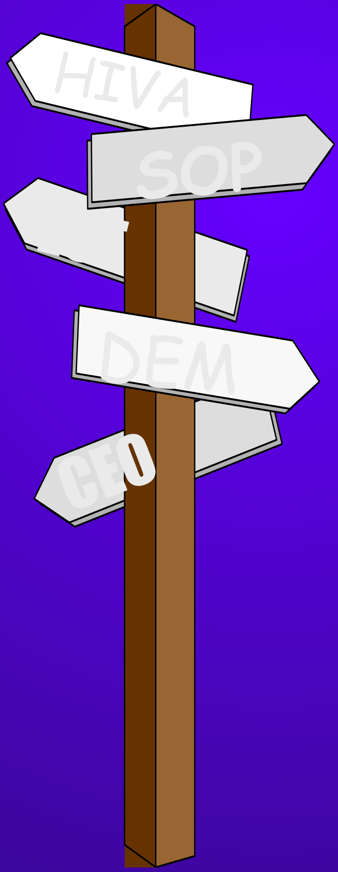
THE PROCESS

– Organize a HIVA committee

HIVA Committee

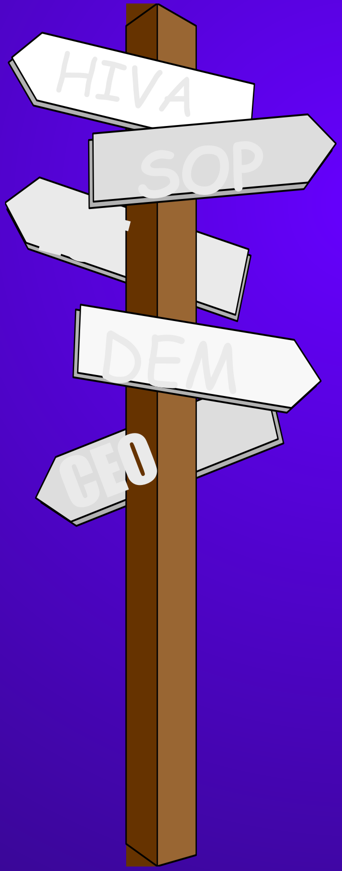


- Coordinator
  - Public Works
  - Fire Department
  - Police Department



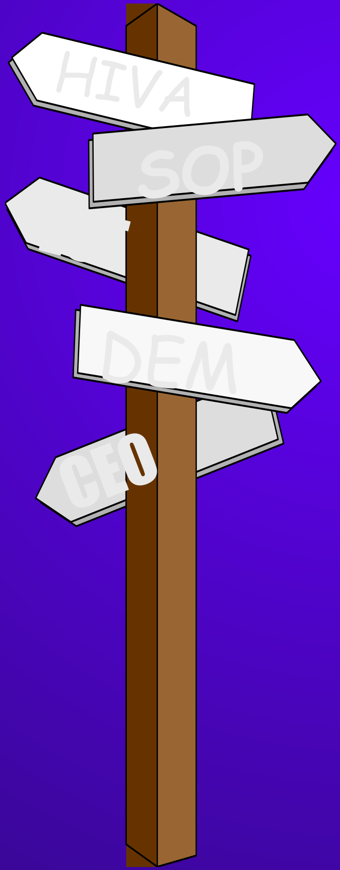
THE PROCESS

- – Gather Jurisdictional Data
  - Geography
  - Economy
  - Demographic



THE PROCESS

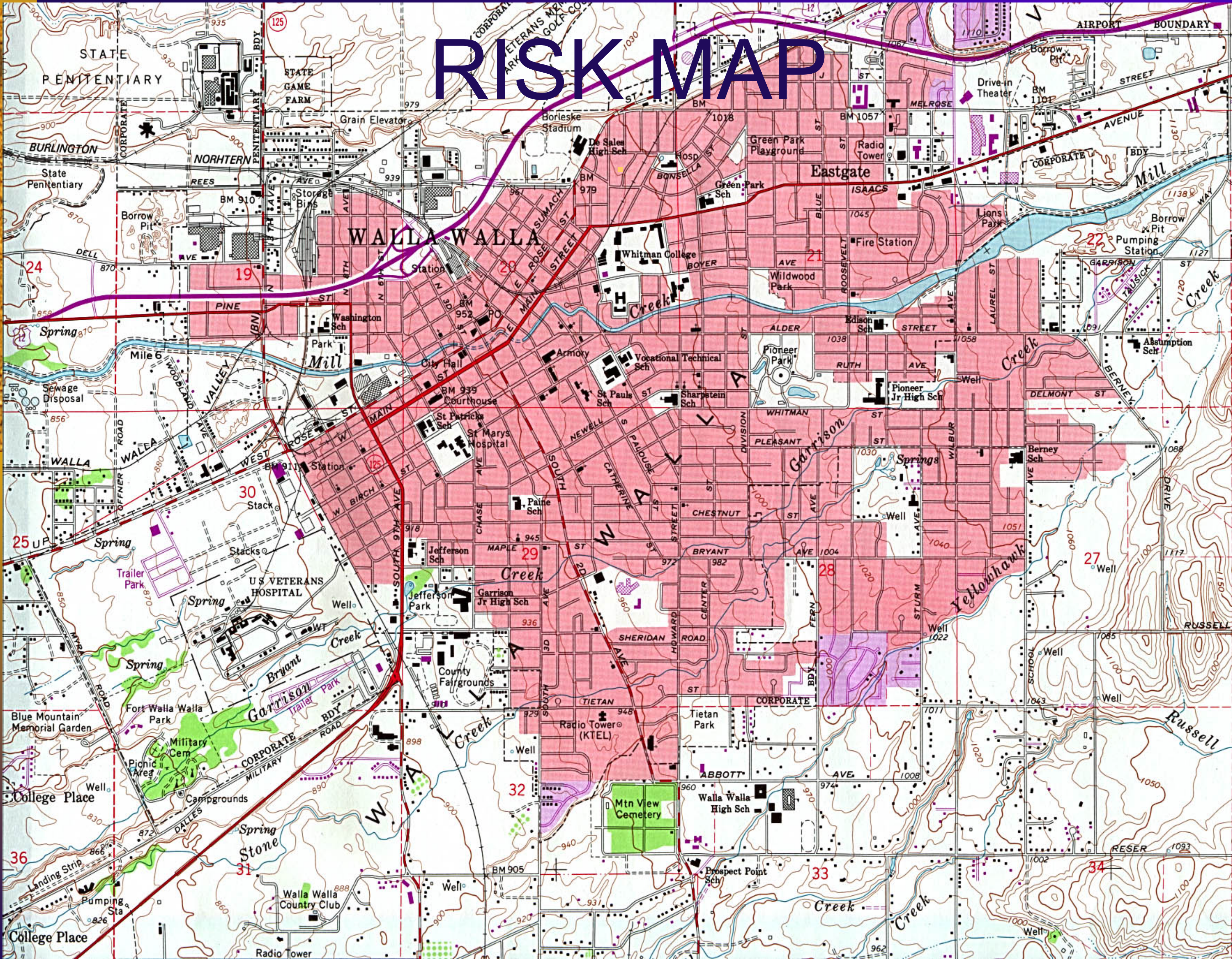
- Identify the Hazards
  - Natural
    - Avalanche
    - Flood
    - Severe Local Storm
  - Technological (man made)
    - Civil Disturbance
    - Pipelines
    - Transportation



RESEARCH HAZARDS

- Prepare a “Risk Map” of vulnerable areas
- Identify the “Critical Facilities” in the vulnerable areas
- Prepare a “Risk Calendar”

RISK MAP



STATE PENITENTIARY
STATE GAME FARM
BURLINGTON NORHTERN
State Penitentiary
Grain Elevator
Borleske Stadium
De Sales High Sch
Hosp
Green Park Playground
Radio Tower
Eastgate
Green Park Sch
AIRPORT BOUNDARY
Borrow Pit
Drive-in Theater
MELROSE
AVENUE
CORPORATE
ISAACS
Lions Park
Mill
Pumping Station
WALLA WALLA
Station
Whitman College
Fire Station
Wildwood Park
BOYER
Borrow Pit
Storage Bins
PINE ST
Spring
Washington Sch
Park
Mill
Mile 6
Sewage Disposal
City Hall
Courthouse
PO
Armory
Vocational Technical Sch
Pioneer Park
Edison Sch
ALDER STREET
RUTH AVE
Assumption Sch
St Pauls Sch
Sharpstein Sch
Pioneer Jr High Sch
DELMONT ST
WHITMAN
St Patricks Sch
St Marys Hospital
NEWELL
PLEASANT
Garrison
Springs
Berney Sch
WALLA WALLA
WEST
Station
Stack
Stacks
Paine Sch
CHESTNUT ST
Well
Jefferson Sch
MAPLE
BRYANT AVE
Creek
Trailer Park
U S VETERANS HOSPITAL
Jefferson Park
Garrison Jr High Sch
Yellowhawk
RUSSELL
Spring
Bryant
Creek
County Fairgrounds
SHERIDAN ROAD
CORPORATE
Blue Mountain Memorial Garden
Fort Walla Walla Park
Military Cem
Picnic Area
Campgrounds
Garrison
Trailer Park
TIETAN
Radio Tower (KTEL)
Tietan Park
Russell
College Place
ABBOTT AVE
Mtn View Cemetery
Walla Walla High Sch
Spring
Stone
Landing Strip
Pumping Sta
Walla Walla Country Club
Prospect Point Sch
RESER
Creek
College Place
Radio Tower
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RISK MAP

- 100 year flood plain
- Hazardous materials areas
- Dams
- Transportation -road, rail, water,air
- Airports
- Business
- Pipelines
- Recreational areas

CRITICAL FACILITIES

Facilities or locations vital to the emergency response effort.

Buildings or locations that if damaged or destroyed would create secondary disasters.

CRITICAL FACILITIES

(examples)

Primary

- Emergency Operation Center (EOC)
- Police and Fire stations
- Hospitals
- County, City, Township highway garages
- Selected roads & bridges
- Stores of needed supplies
- Evacuation routes

CRITICAL FACILITIES

(examples)

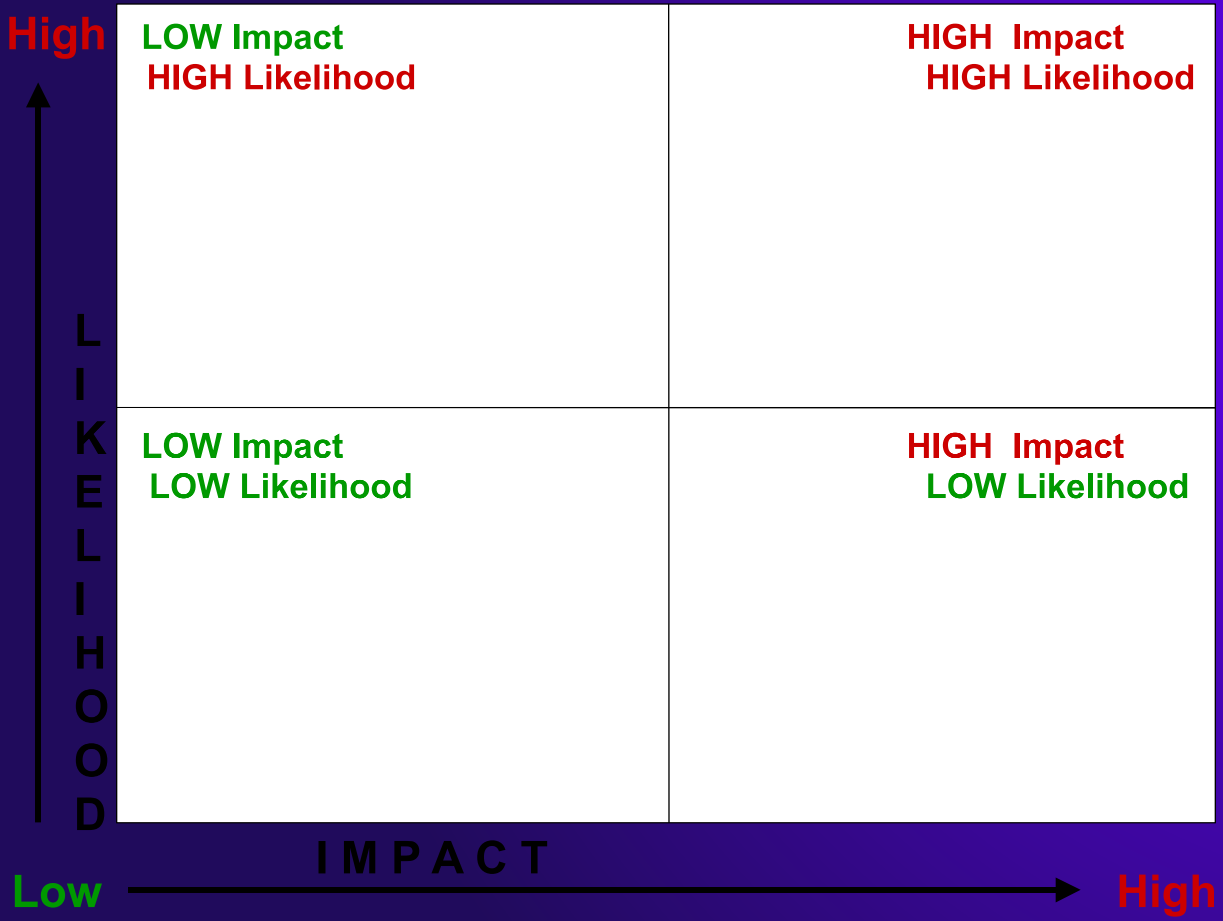
Secondary:

- Hazardous materials facilities
- Water treatment plants
- Wastewater treatment plant
- Schools
- Nursing Homes
- Hotels/Motels
- Civic Centers

RISK CALENDAR

A schedule of hazards.

RATE VULNERABILITY



LOW Impact HIGH Likelihood	HIGH Impact HIGH Likelihood
LOW Impact LOW Likelihood	HIGH Impact LOW Likelihood

SUMMARY

We have discussed how to:

- Identify Hazards
- Determine Vulnerability
- Develop a HIVA

CONCLUSION

- Hazard Analysis and the HIVA are:
  - The foundation for Emergency Management Planning
  - Needed for the development of mitigation, preparedness, recovery and response strategies